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From the

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INTERNATIONAL PRELIMINARY EXAM

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing (day/month/year)

14.09.2000

Applicant's or agent's file reference RCA89185

DIS

IMPORTANT NOTIFICATION

International application No. PCT/US99/30761

International filing date (day/month/year) 22/12/1999

Priority date (day/month/year) 28/12/1998

Applicant

THOMSON LICENSING S.A. et al.

- 1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
- 2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
- Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

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Authorized officer
SCHALINATUS, D

00, 11, 12, 11, 11, 00, 0

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# PATENT COOPERATION TREATY

# **PCT**

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| Applicant's or agent's file reference             |   |  | See Notification of Transmittal of International FOR FURTHER ACTION Preliminary Examination Report (Form PCT/IPEA/416)  |                |   |  |
|---|---|--|---|----------------|---|--|
| HCA89185  |   |  |   |                |   |  |
| International application No. International filin |   |  | International filing date (day/mont   | th/year)       | Priority date (day/month/year)  |  |
| PCT/US9   |   |  | 22/12/1999  |                | 28/12/1998  |  |
| nternationa<br>H04N5/44                           | _                                       | Classification (IPC) or na   | ational classification and IPC  |                |   |  |
| Applicant   |   |  |   |                |   |  |
| THOMSO  | N LIC                                   | ENSING S.A. et al.   |   |                |   |  |
| 1. This is  | nternat<br>transr                       | ional preliminary exam<br>nitted to the applicant  | nination report has been prepare according to Article 36.   | ed by this Int | ernational Preliminary Examining Authority  |  |
| 2. This F   | REPOF                                   | RT consists of a total of  | f 4 sheets, including this cover  | sheet.         | •   |  |
| b   | een an                                  | nended and are the ba  | ed by ANNEXES, i.e. sheets of tasis for this report and/or sheets 607 of the Administrative Instruc   | containing r   | on, claims and/or drawings which have rectifications made before this Authority the PCT). |  |
| These   | e anne                                  | xes consist of a total o   | f sheets.   |                |   |  |
|   |   |  |   |                |   |  |
|   |   |  |   |                |   |  |
|   |   |  |   |                |   |  |
| 3. This   | report o                                | contains indications rel   | lating to the following items:  |                |   |  |
| 3. This i   | ·                                       | contains indications rel   | lating to the following items:  |                |   |  |
|   | ⊠<br>□                                  | Basis of the report<br>Priority  |   |                |   |  |
| 1   | ⊠<br>□                                  | Basis of the report<br>Priority  | lating to the following items:<br>opinion with regard to novelty, i   | inventive ste  | p and industrial applicability  |  |
| <br> 1  |   | Basis of the report Priority Non-establishment of Lack of unity of invent  | opinion with regard to novelty, i   |                |   |  |
| <br> 11<br> 111                                   |   | Basis of the report Priority Non-establishment of Lack of unity of invent Reasoned statement   | opinion with regard to novelty, i   |                | p and industrial applicability<br>ventive step or industrial applicability;               |  |
| <br>  <br>   <br> V                               |   | Basis of the report Priority Non-establishment of Lack of unity of invent Reasoned statement citations and explanat Certain documents ci   | opinion with regard to novelty, ition<br>under Article 35(2) with regard t<br>tions suporting such statement<br>ited  |                |   |  |
| <br>  <br>   <br> V<br>                           |   | Basis of the report Priority Non-establishment of Lack of unity of invent Reasoned statement o citations and explanat Certain documents of Certain defects in the                                  | opinion with regard to novelty, it<br>tion<br>under Article 35(2) with regard t<br>tions suporting such statement<br>ited<br>international application                                      |                |   |  |
| <br>  -<br>  -<br>                                |   | Basis of the report Priority Non-establishment of Lack of unity of invent Reasoned statement o citations and explanat Certain documents of Certain defects in the                                  | opinion with regard to novelty, ition<br>under Article 35(2) with regard t<br>tions suporting such statement<br>ited  |                |   |  |
| <br>   <br> V<br> <br> <br> <br> <br>             |   | Basis of the report Priority Non-establishment of Lack of unity of invent Reasoned statement citations and explanat Certain documents of Certain defects in the Certain observations               | opinion with regard to novelty, it<br>tion<br>under Article 35(2) with regard to<br>tions suporting such statement<br>ited<br>international application<br>on the international application |                | ventive step or industrial applicability;   |  |
| <br>   <br> V<br> <br> <br> <br> <br>             |   | Basis of the report Priority Non-establishment of Lack of unity of invent Reasoned statement o citations and explanat Certain documents of Certain defects in the                                  | opinion with regard to novelty, it<br>tion<br>under Article 35(2) with regard to<br>tions suporting such statement<br>ited<br>international application<br>on the international application | to novelty, in | ventive step or industrial applicability;   |  |
| <br>   <br> V<br> <br> <br> <br> <br>             | ⊠ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ | Basis of the report Priority Non-establishment of Lack of unity of invent Reasoned statement citations and explanat Certain documents of Certain defects in the Certain observations               | opinion with regard to novelty, ition under Article 35(2) with regard toons suporting such statement ited international application on the international application Date                   | to novelty, in | ventive step or industrial applicability;   |  |
|   | ⊠ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ | Basis of the report Priority Non-establishment of Lack of unity of invent Reasoned statement citations and explanat Certain documents of Certain defects in the Certain observations of the demand | opinion with regard to novelty, ition under Article 35(2) with regard to tions suporting such statement ited international application on the international application  Date               | of completion  | ventive step or industrial applicability;   |  |
|   | bmissio                                 | Basis of the report Priority Non-establishment of Lack of unity of invent Reasoned statement citations and explanat Certain documents ci Certain defects in the Certain observations               | opinion with regard to novelty, ition under Article 35(2) with regard toons suporting such statement ited international application on the international application  Date 14.09            | of completion  | of this report  |  |

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US99/30761

| I. | <b>Basis</b> | of the | report |
|----|--------------|--------|--------|
|----|--------------|--------|--------|

1. This report has been drawn on the basis of (substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.): Description, pages: as originally filed 1-10 Claims, No.: as originally filed 1-5 Drawings, sheets: as originally filed 1/5-5/5 2. The amendments have resulted in the cancellation of: ☐ the description, pages: ☐ the claims, Nos.: ☐ the drawings, sheets: 3. 

This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

Form PCT/IPEA/409 (Boxes I-VIII, Sheet 1) (January 1994)

4. Additional observations, if necessary:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US99/30761

- V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- 1. Statement

Novelty (N)

Yes:

Claims 1-5

No:

Claims

Inventive step (IS)

Yes:

Claims 1-5

No:

Claims

Industrial applicability (IA)

Yes:

Claims 1-5 Claims

No: Clai

2. Citations and explanations

see separate sheet

# VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

## V Reasoned statement under Article 35(2)

- The invention concerns a method of operating video processing apparatus which is capable of running both computer application software programs and TV programming. The method involves displaying on screen an advertisement for a broadcast TV programme at a time when the processing apparatus is in fact running a computer application software program, the example of the latter quoted in the description being an E-mail program. The user is then able to select the advertisement and in response to this selection the video processing apparatus then starts running in a video operation mode, e.g. it can tune in to the selected programme or switch on a video recorder to record the programme. The Search Report cited one document in the X category and two in the Y category nonetheless there would appear to be in the three documents cited no disclosure or suggestion of the subject matter indicated above, so that the subject matter claimed can be considered to be new and to have inventive step.
- 2 The claimed invention finds industrial applicability in the field of television.

## VIII Certain observations on the international application

It would seem that "selection of" should be inserted after "response to" in the last line of claim 1.

W\_



## **INTERNATIONAL SEARCH REPORT**

(PCT Article 18 and Rules 43 and 44)

| Applicant's or agent's file reference RCA89185   |   | of Transmittal of International Search Report<br>20) as well as, where applicable, item 5 below. |  |  |  |  |
|--|---|--|--|--|--|--|
| International application No.  | International filing date (day/month/year)  | (Earliest) Priority Date (day/month/year)  |  |  |  |  |
| PCT/US 99/30761  | 22/12/1999  | 28/12/1998   |  |  |  |  |
| Applicant  |   | <u> </u>   |  |  |  |  |
| THOMSON LICENSING S.A. et  | al.   |  |  |  |  |  |
| This International Search Report has been according to Article 18. A copy is being tre | n prepared by this International Searching Aut<br>ansmitted to the International Bureau.          | hority and is transmitted to the applicant   |  |  |  |  |
| This International Search Report consists    X   | of a total of sheets. a copy of each prior art document cited in this                             | report.  |  |  |  |  |
| Basis of the report  |   |  |  |  |  |  |
|  | international search was carried out on the ba<br>ess otherwise indicated under this Item.        | sis of the international application in the  |  |  |  |  |
| the international search w<br>Authority (Rule 23.1(b)).                                | as carried out on the basis of a translation of t   | he international application furnished to this   |  |  |  |  |
| b. With regard to any nucleotide an was carried out on the basis of the                | d/or amino acid sequence disclosed in the in  | nternational application, the international search   |  |  |  |  |
|  | onal application in written form.   |  |  |  |  |  |
| filed together with the inte   | mational application in computer readable for   | m.   |  |  |  |  |
| furnished subsequently to  | this Authority in written form.   |  |  |  |  |  |
| furnished subsequently to  | this Authority in computer readble form.  |  |  |  |  |  |
| the statement that the sub<br>international application a                              | esequently furnished written sequence listing of<br>a filed has been furnished.                   | loes not go beyond the disclosure in the   |  |  |  |  |
| the statement that the info<br>furnished   | rmation recorded in computer readable form i  | s identical to the written sequence listing has been   |  |  |  |  |
| 2. Certain claims were fou   | nd unsearchable (See Box I).  |  |  |  |  |  |
| 3. Unity of invention is lac   | king (see Box II).  |  |  |  |  |  |
| 4. With regard to the <b>title</b> ,   |   |  |  |  |  |  |
| X the text is approved as su   | bmitted by the applicant.   |  |  |  |  |  |
|  | hed by this Authority to read as follows:   |  |  |  |  |  |
| 5. With regard to the <b>abstract,</b>   X   the text is approved as su                | ibmitted by the applicant.  |  |  |  |  |  |
| the text has been establis within one month from the                                   | hed, according to Rule 38.2(b), by this Author<br>date of mailing of this international search re | ity as it appears in Box III. The applicant may,<br>port, submit comments to this Authority.     |  |  |  |  |
| 6. The figure of the drawings to be publ   | ished with the abstract is Figure No.   | 4  |  |  |  |  |
| X as suggested by the appli  | cant.   | None of the figures.   |  |  |  |  |
| because the applicant fail   | ed to suggest a figure.   |  |  |  |  |  |
| because this figure better   | because this figure better characterizes the invention.   |  |  |  |  |  |

# INTERNATIONAL SEARCH REPORT

tional Application No PCT/US 99/30761

| A CLASSI<br>IPC 7  | FICATION OF SUBJECT MATTER H04N5/445   |   |                       |  |  |  |  |
|--|--|---|-----------------------|--|--|--|--|
| <del></del>  | o International Patent Classification (IPC) or to both national classification   | ation and IPC                               |                       |  |  |  |  |
|  | SEARCHED  commentation searched (classification system followed by classification)   | on symbols)                                 |                       |  |  |  |  |
| IPC 7  | H04N   |   |                       |  |  |  |  |
| Documenta  | tion searched other than minimum documentation to the extent that s  | uch documents are included in the fields ea | parched               |  |  |  |  |
|  | lata base consulted during the International search (name of data base   | se and, where practical, search terms used  | )                     |  |  |  |  |
|  | ENTS CONSIDERED TO BE RELEVANT   |   |                       |  |  |  |  |
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| Furti  | her documents are listed in the continuation of box C.   | X Patent family members are listed          | In annex.             |  |  |  |  |
| "A" docume<br>consid<br>"E" earlier o  | *Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document but published on or after the international  "X" document of particular relevance; the claimed invention |   |                       |  |  |  |  |
| filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "Council to considered novel or cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such document. |  |   |                       |  |  |  |  |
| "P" docume<br>later ti   | "P" document published prior to the international filing date but in the art.   |   |                       |  |  |  |  |
| Date of the  | actual completion of the international search  | Date of mailing of the international sec    | arch report           |  |  |  |  |
| 1  | 2 April 2000   | 18/04/2000                                  |                       |  |  |  |  |
| Name and r   | Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentiaan 2  NL – 2280 HV Rijswijk  Authorized officer   |   |                       |  |  |  |  |
|  | Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,<br>Fax: (+31-70) 340-3016 Materne, A  |   |                       |  |  |  |  |

# INTERNATIONAL SEARCH REPORT

tion on patent family members

It tional Application No
PCT/US 99/30761

| Patent document<br>cited in search report |   | Publication date |          | atent family<br>member(s) | Publication date         |
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#### FOR THE PURPOSES OF INFORMATION ONLY

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REPUBLIC OF FRANCE

Publication No.:

2 726 717

(indicate only when ordering reprints)

National File No.: 94 13401

Industrial Property

National Institute for

**PARIS** 

Int. Cl.<sup>6</sup>: H 04 N 5/272, 5/445

## PATENT APPLICATION

**A1** 

Filing date: 8 November 94

Priority:

Date at which the application

was laid open to the public: 10 May 96 Bulletin 96/19

List of documents cited in the preliminary search report: See report at the end of this copy

References to other national published documents:

Applicant: LACROSSE PHILIPPE - FR

Inventor(s):

Proprietor(s):

Representative(s): Offices BALLOT SCHMIT

### PROCESS FOR DISPLAYING INFORMATION ON A TELEVISION.

The invention relates to processes for displaying information on a television set. It comprises dividing the screen of such a television into at least two parts, one of which (102) causes a command menu (104-109) to be displayed, and the other (103) causes information to be displayed, for example of the advertising type. It permits obtaining a maximum of effectiveness of advertising information without inconveniencing the television viewer.

ADVERTISING - 103 INFORMATION - 101 - 110 TIME - 111 COMMANDS - 102

#### PROCESS FOR DISPLAYING INFORMATION ON A TELEVISION.

The present invention relates to processes which permit displaying information on a television set such that the person watching the television is aware of it either for purely informative purposes or to exercise actions in response to this information.

Teletext systems are known which permit displaying pages of information about various subjects. The content of this information is especially encoded digitally for the duration of the video lines available during the frame return. The codes thus transmitted are displayed alphanumerically on the television screen. For example, the broadcaster (the television channel) repetitively broadcasts a certain number of pages or lines of information which is sequential. The television viewer whose set is equipped with an adapted device picks up from the broadcast one of these lines or pages which they have selected. The information picked up is stored in volatile memory and displayed immediately. It is possible to develop several hundred pages but the operators of the television channels are presently limited to a few dozen which permits accessing relatively quickly the page which a viewer wants to consult. In practice the television viewer selects and displays a page number and when the latter is broadcast in the sequence it is stored in memory and displayed continuously on the television. To reach another page it is necessary to start again. It is considered that if all of the pages which can be used were successively selected, access to any of them would be long and tedious. Moreover, the repetitive nature of the broadcast defeats the purpose of the quantity of information which can be broadcast.

It is also known how to display on the television a certain number of parameters permitting adjusting the latter. Thus, by action on the remote control of the television the viewer can cause, for example, a scale representing the sound volume to be displayed. By then manipulating a "+" or "-" key it is possible to adjust this volume to a determined level, which is represented by an index moving along on this scale. This control is generally rudimentary and does not permit accessing adjustments except one

by one.

The applicant described moreover and claimed in French patent application 93 03440, filed on March 25, 1993, a process for controlling an activator, more especially permitting programming a television or a video cassette recorder so as to control the display or the recording of a television program on a given channel and at a given time, even in the operator's absence.

These various briefly recalled processes are relatively independent of each other. They do not permit in particular bringing moreover to the awareness of the viewer information which should be brought to his attention and which he must employ when performing another action.

To obtain this effect, the invention proposes a process for information display on a television set, characterized in that at the time of the application of a command by an operator, the screen of the television is divided into at least a first and a second different distinct area, the first zone showing a screen containing a menu and/or the first set of information, and the second zone showing the second set of information transmitted in an encoded manner in the signals received by the television, stored in a non-volatile memory of this television, and retrieved sequentially and automatically by successive retrievals from this non-volatile memory.

According to another characteristic, the sequence is periodically and randomly repetitive.

According to another characteristic, the second set of information is composed of advertising sequences.

According to another characteristic, the television screen contains moreover a third display area permitting display of information related to television programs broadcast

or related to information of a documentary nature, this information being continuously updated and this information being selected for its display by actions corresponding to choices offered in the menu of the first zone.

According to another characteristic the information displayed in the first and the third zones is displayed under the command of a clock permitting obtaining a display in real time of the information displayed in the third zone.

Other features and advantages of the invention will become evident in the following description presented by way of non-limiting example with regard to the enclosed Figures which represent:

Figure 1: a television screen on which is displayed information according to a first variant of the process according to the invention,

Figure 2: a television screen on which is displayed information according to a second variant of the process according to the invention, and,

Figure 3: a diagram of the memory of a television set, intended to receive the information to be displayed as well as the clocks permitting operating these memories.

There is represented in Figure 1 the screen of a television on which is displayed various information with the aid of the process according to the invention.

In this embodiment example the screen of this television is divided into two parts with essentially equal surface areas, a lower part 102 and an upper part 103, [or] where applicable a vertical right part and a left part.

On the lower part 102 is displayed different information such as a table of topics 104,

the indications of a clock 105, a table of television channels 106, two buttons "+" and "-" 106 and 107, and an "end" button 109. This various information, the list of which is not limiting, forms a menu and is accessible with the aid of a cursor, itself displayed on the screen and which can be moved with the aid of a remote control T equipped with a validation button V. This cursor is, for example, represented by a highlighting of the chosen menu option. The movement of the cursor may be obtained by a remote control of the type described in the patent application cited above or in the utility patent 93 07094. With the associated circuits in a box of this type of remote control described, it is possible to equip the set of television sets already in service with the process of the invention. The remote control may also be of the type used in a known Teletext system. Pressing this validation button V permits selecting the information in the boxes, changing some of it as a function of the action on the "+" and "-" buttons, then ending the display by action on the V button when the cursor is on "end". The display of the entirety of the screen 101 during the course of a television broadcast is caused by pressing the V button.

The lower part 102 of the screen corresponds in particular to the object of patent application number 93 03440 cited above. Nevertheless, this part may correspond to documentary information readable in plain text on the television screen. This information may be for example an electronic newspaper. The content of the part 102 is subject to an action by the operator who selects the remote control.

According to the invention the upper half of the screen 103 contains information which should be brought to the attention of the television viewer without the latter having a priori influence on this display.

Thus in the example represented in the figure, information concerning an advertisement is displayed on this part 103. Therefore when the viewer wants to use the command menu given in part 102, he automatically sees the display on the part 103 of the information in still or moving pictures, which have been deemed necessary to present

to him by priority. This information may be of a very diverse nature and include besides that corresponding to advertising information, documentary information on a given subject.

One of the interests in showing advertising information in this location is that the viewer himself interrupted the program which was in progress to be able to use the command menu. Therefore this does not bring about a rejection which is frequent when the advertising screens come interspersed during a program during some especially interesting action. There is therefore avoided the current reaction of television viewers who go to wash their hands when the advertising program is being broadcast. On the other hand the television viewer occupied by using his command screen sees simultaneously the advertising screen without being forced to give it substantial attention, and it is known that very often advertising is all the more effective when it is provided in a subconscious way. Moreover the television viewer interested in a particular advertisement or a particular passage of an advertising screen, can easily abandon the command menu to devote a moment to what interests him in the advertisement, then return to his command menu again. This makes it possible to obtain the effect, often sought in advertising, of sending the advertising message essentially to those who may be affected by it. This mode of advertising display is therefore particularly effective. Above all the fact of presenting advertising in a sequential way by changing the message regularly, apart from the fact that this contributes to reducing the installation cost of such a system, provides a protection of the screen whose photophores are not always stressed by a given luminosity to the point of ending up by being marked with fixed images.

According to another embodiment of the invention represented in Figure 2 the television screen 101 is divided into three parts 102, 103, and 110. The parts 102 and 103 contain, as already seen, the control panel and information, especially advertising. The part 110 includes for its part information concerning future programs, quite especially the schedules of these programs, and, where applicable, continuously updated, in

particular as to their starting and ending times. The part 110 may also contain the electronic newspaper mentioned above or even other information.

The display of this program information may be carried out according to different variants which may, as needed, be themselves programmed by the television viewer, where applicable even during the startup of the television. It is possible therefore for example to limit the information to that which relates to the channel which is currently being watched, or extend all of the information to all of the channels, even to a selection of channels when the latter would be too numerous to obtain a truly effective display, for example in the case of a connection by means of a cable network or by reception from one or more satellites.

This selection may be obtained by selecting with the cursor certain options on the menu. The principle of this selection may be the following. With the arrows [the viewer] points to an option. With the V button of the remote control [the viewer] validates and invalidates alternatively to each action the option pointed to. The content of the display being necessarily limited by the display capability of the television, this leads to a compromise between the extent in time, the number of channels to be displayed, and the extent of the information to be displayed. It is possible also to provide a marker which will arrive by a particular signal, a flashing for example, to draw attention to the presence of a sequence of the display, even to the imminent beginning of a broadcast. In this same optical [framework], it is possible to provide as an overlay in the part 102 reserved for the control panel, a space 111 reserved for the time which will be decoded in the television signals in order to obtain an exact time indication.

As has already been seen previously all of the information thus displayed may be obtained by decoding digital signals transmitted sequentially in frame return suppression lines or where applicable outside of broadcasts, or even on a separate channel. Since this information takes a certain amount of time to arrive, and since it is

necessary to use it immediately in order to prevent the television viewer from being led to wait longer than he wants when he calls up the control panel, this information is stored in a non-volatile memory. Figure 3 shows such a memory to be integrated into the television receiver.

Therefore the invention proposes therefore moreover dividing the memory used for that into at least two parts M1 and M2 assigned to the zones 103 and 102 respectively as represented by the references 301 and 302 in Figure 3. The memory is of the type described in the previously cited application. It may also be of the hard disk type in a microcomputer. The division may be physical, the various parts even being of different technologies. To simplify the explanation it will be assumed that these different parts are essentially addressed differently.

Actually, the information intended to be displayed in the part 103 of advertising messages for example is not of a nature as imperative as that intended to be displayed in the parts 110 or 102.

Under these conditions the content will be read of the memory M2 upon request to constitute the zones 110 and 102. The content of the memory M1 on the other hand will be read at the rate of a clock H1 referenced 303 to serve for the display of the part 103. At each step of the clock H1, for example, every 10 seconds, the latter selects in the zone M1 a different sector Si, permitting a different advertising message. For example, by ignoring the existence of half frames to simplify the explanation, the clock H1 is connected to a generator of addresses G1 which according to the status of the output of the clock H1, points (cyclically) to a different sector Si of M1. Another address generator G2 points to sectors Sj of the part M2 as a function of signals delivered by the remote control T. The picture is constituted permanently by reading the sectors Si and Sj pointed to. Even if no action is taken on the remote control, the clock H1 causes from time to time the reading of another message in the non-volatile memory M1 and the changing of the advertising message displayed.

It is possible for the clock H1 to use circuits which, according to a known method, permit reading the sectors of the memory corresponding to different screens according to a random or cyclic reading process. Thus, in the case of advertising information for example, it is possible to avoid having a repetitive display which is known to exert a tiresome effect on the television viewer, which may lead to a rejection of said advertising, which is deplorable. A random appearance of the advertising screens will, on the other hand, have a more acceptable effect and will draw more of the television viewer's attention. As needed, the address generator G1 is a random address generator. As a variant, the clock H1 may be replaced by a signal transmitted by the television channel, counted in a counter, with the counting result serving to call up the generator G1.

To constitute the zones 110 and 102 the generator G2 may contain a first sub-generator G21 which points permanently to a sector Sk containing information necessary for the constitution of the menu (zone 102) and a second sub-generator G22 controlled by the remote control T for addressing the information necessary for the constitution of the programs displayed (zone 110). As concerns this program information, the choices made with the remote control are processed in real time by a microprocessor of the television or by a microprocessor of a control box of this television of the type of that described in the previously cited patent application. This microprocessor constitutes the address generator for pointing to the sectors to be displayed. The result of the selections which are made is, in fact, a series of addresses of sectors to be displayed.

The display of pictures per se conforms to known technology. The storage of the various bits of information in the memory M1 - M2 is undertaken preferably according to a mode described in the previously cited patent application. The memory M1 - M2 is non-volatile, for example of the type EEPROM or RAM safeguarded in order to keep the information even in the case of a cutoff of the television power supply. It may likewise be a unit of the hard disk type of a personal microprocessor (PC) with all of its reading and management organs. The program information there is updated regularly.

#### **PATENT CLAIMS**

- 1. A process for displaying information on a television set, characterized in that at the time of application of a command by the operator, the screen (101) of the television set is divided into at least a first and a second different display zone, a first zone (102) showing a menu and/or first information whose content depends upon the operator's action, and a second zone (103) showing second bits of information transmitted in an encoded manner in the signals received by the television set, stored in a non-volatile memory (301-302) of this television set, and displayed sequentially by successive retrievals (H1) from this non-volatile memory.
- 2. A process according to claim 1, characterized in that the sequence is cyclically repetitive.
- 3. A process according to claim 1, characterized in that the sequence is randomly repetitive.
- 4. A process according to any of the claims 1 through 3, characterized in that the second set of information is composed of advertising sequences.
- 5. A process according to any of the claims 1 through 4, characterized in that the screen (101) of the television set comprises moreover a third zone (110) of display permitting displaying television programs updated regularly, this information being selected for viewing by actions corresponding to choices proposed in the menu of the first zone.
- 6. A process according to any of the claims 1 through 6, characterized in that the screen (101) of the television set contains moreover a third zone (110) for displaying documentary information.

## FRENCH REPUBLIC

# Search Report

### 2726717

National Application No.

NATIONAL INSTITUTE OF INTELLECTUAL PROPERTY

established on the basis of the last claims filed before the search was started

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The present search report was completed for all patent claims

Search completed 7 June 1995

Examiner Verschelden, J

Category of cited documents

- A Pertinent in opposition to more than one claim or general background technology
- X Particularly pertinent by itself
- Y Particularly pertinent in combination with another document of the same category

FRENCH REPUBLIC

# Search Report

2726717

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established on the basis of the last claims filed before the search was started

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A Pertinent in opposition to more than one claim or general background technology

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